

City of Hopewell Green Guide



A best practice guide for
employees and citizens on
energy conservation and
environmental stewardship.

Introduction

Dear Fellow Citizens and Employees,

Welcome to the Hopewell Green Guidebook! Whether by virtue of your residence or your place of employment you are a member of the Hopewell community, and as such, you contribute to the overall sustainability of this City. You decide what your contribution will be. It can be a positive one, or a negative one, based on your actions during your stay here.

2009 brings with it a new set of challenges along with the inherent ones that we have had through the years. Environmental stewardship is a subject that has drawn an increasing amount of attention over time, as we recognize more and more our need to reduce our negative impact on the environment. Though not new to Americans, the economic environment is also once again making us watch our expenditures a little more closely.

The goal of this booklet is to increase your knowledge of things that you can do to help the environment and conserve costs, both at home and on the job. While it is by no means a comprehensive guide, we hope that it will provide you with information to personally promote a more sustainable future for you and the City of Hopewell through energy efficiency and environmental stewardship.

Sincerely,

The Hopewell Green Team

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What is the City Doing?

Wanting to lead by example, your City Government recognizes that sustainability begins in-house. To that end, the City has begun a process of implementing policies that promote a more sustainable future through fiscal and environmental practices that both help the environment and save the taxpayer money. Below are a few examples of what has been accomplished to date:

- **Citywide Recycling drop off-** The City has four recycling drop-off locations for use by citizens and City departments. City departments are being encouraged to recycle more aggressively.
- **City Vehicle No-Idle Policy-** The city has a policy that vehicles will not be left idling for any extended period of time. This will save on fuel and reduce emissions (certain exemptions apply for specific circumstances and emergency vehicles).
- **New Vehicle Evaluation-** Any proposed new vehicle purchases by City departments require evaluation based on fuel efficiency and environmental impact in order to choose the most sustainable choice for the application.
- **Energy Efficiency Policy-** The City has a new energy efficiency policy that requires employees to abide by guidelines that reduce our energy consumption; thus reducing our operating costs and carbon footprint.

Home Energy Checklist

To Do Today



- Turn down the temperature of your water heater to the warm setting (120°F). You'll not only save energy, you'll avoid scalding your hands.
- Check if your water heater has an insulating blanket. An insulating blanket will pay for itself in one year or less!

- If you have one of those silent guzzlers, a waterbed, make your bed today. The covers will insulate it, and save up to one-third of the energy it uses.
- Start using energy-savings settings on refrigerators, dishwashers, washing machines, and clothes dryers.



- Survey your incandescent lights for opportunities to replace them with compact fluorescents (CFLs). These lamps can save three-quarters of the electricity used by incandescents. The best targets are 60-100W bulbs used several hours a day. New CFLs come in many sizes and styles to fit in most standard fixtures.
- Check the age and condition of your major appliances, especially the refrigerator. You may want to replace it with a more energy-efficient model.
- Clean or replace furnace, air-conditioner, and heat-pump filters.

This Week

- Visit the hardware store. Buy a water-heater blanket, low-flow showerheads, faucet aerators, and compact fluorescents, as needed.
- Rope-caulk very leaky windows.
- Assess your heating and cooling systems. Determine if replacements are justified, or whether you should retrofit them to make them work more efficiently to provide the same comfort (or better) for less energy.



This Month

- Collect your utility bills. Separate electricity and fuel bills. Target the biggest bill for energy conservation remedies.
- Crawl into your attic or crawlspace and inspect for insulation. Is there any? How much? Insulate hot water pipes and ducts wherever they run through unheated areas.
- Seal up the largest air leaks in your house—the ones that whistle on windy days, or feel drafty. The worst culprits are usually not windows and doors, but utility cut-throughs for pipes ("plumbing penetrations"), gaps around chimneys, recessed lights in insulated ceilings, and unfinished spaces behind cupboards and closets. Better yet, hire an energy auditor with a blower door to point out where the worst cracks are. All the little, invisible cracks and holes may add up to as much as an open window or door, without you ever knowing it!
- Install a clock thermostat to set your thermostat back automatically at night.



- Schedule an energy audit (ask your utility company or state energy office) for expert advice on your home.

This Year

- Insulate. If your walls aren't insulated have an insulation contractor blow cellulose into the walls. Bring your attic insulation level up to standards.



- Replace aging, inefficient appliances. Even if the appliance has a few useful years left, replacing it with a top-efficiency model is generally a good investment.
- Upgrade leaky windows. It may be time to replace them with energy-efficient models or to boost their efficiency with weather stripping and storm windows.
- Have your heating and cooling systems tuned up in the fall and spring, respectively. Duct sealing can also improve the energy efficiency and overall performance of your system (warm-air furnace and central air conditioners).
- Know that you are making a difference!



Green Driving Tips

- Avoid "jack rabbit" starts and aggressive driving. Flooring the gas pedal not only wastes gas, it leads to drastically higher pollution rates. One second of high powered driving can produce nearly the same volume of carbon monoxide emissions as a half hour of normal driving.
- Think ahead. Try to anticipate stops and let your vehicle coast as much as possible. Avoid the increased pollution, wasted gas, and wear on your brakes created by accelerating hard and braking hard.



- Follow the speed limit! Driving 75 mph instead of 65 mph will lower your fuel economy by about 10 percent, and can dramatically increase tailpipe pollution in many vehicles.
- When possible, plan your trips to avoid rush hour. Stop-and-go driving burns gas and increases emissions of smog-forming pollutants.
- Combine trips. Warmed-up engines and catalysts generate much less air pollution, so combining several short trips into one can make a big difference.
- Take a load off. Carrying around an extra 100 pounds reduces fuel economy by about 1 percent. Take a few moments to unload your cargo area!
- If your vehicle has it, use overdrive gear at cruising speeds. When driving a manual transmission, shift up as soon as possible. Running in a higher gear decreases the rpm, and will decrease fuel use and engine wear.



- Try using the vents and opening windows to cool off before you turn on the air conditioner. Air conditioner use increases fuel consumption, increases NOx emissions in some vehicles, and involves environmentally damaging fluids.



- Unlike many older cars, and trucks, modern vehicles don't need to warm up and they have automatic chokes, so you don't need to step on the gas peddle before starting the engine.
 - Fuel your vehicle in the morning or the evening when it is cooler and less fuel will evaporate during the fueling process.
- Carpool, bike, or use mass transit when commuting to work.

Office Energy Checklist



- Replace incandescent lights with compact fluorescent lights (CFLs) for desk lamps and overhead lighting. Using CFLs instead of comparable incandescent bulbs can save about 50 percent on your lighting costs. CFLs use only one-fourth the energy and last up to 10 times longer.
- Switch off all unnecessary lights. Use dimmers, motion sensors, or occupancy sensors to automatically turn off lighting when not in use to reduce energy use and costs.
- Turn off lights when you leave at night.
- Use natural lighting or daylighting. When feasible, turn off lights near windows.
- Use task lighting; instead of brightly lighting an entire room, focus the light where you need it, to directly illuminate work areas.
- When replacing old equipment, purchase energy efficient ENERGY STAR® products.
- Close or adjust window blinds to block direct sunlight to reduce cooling needs during warm months. Overhangs or exterior window covers are most effective to block sunlight on south-facing windows.
- In the winter months, open blinds on south-facing windows during the day to allow sunlight to naturally heat your workspace. At night, close the blinds to reduce heat loss at night.



- Unplug equipment that drains energy when not in use (i.e. cell phone chargers, fans, coffeemakers, desktop printers, radios, etc.).



- Turn off your computer and monitors at the end of the work day, if possible. If you leave your desk for an extended time, turn off your monitor.
- Turn off photocopier at night; or, when purchasing a new copier purchase one with low standby feature. Purchase printers and fax machines with a power management feature and use it.
- Coordinate with vending machine vendor to turn off advertising lights.
- Have a qualified professional perform an energy audit. Check with your utility company for names of auditors.
- Clean or change furnace filters once a month during the heating season.
- Check furnace ducts for disconnects or leaks.
- Ensure HVAC ductwork is well insulated.
- Insulate water heater, hot water piping and tanks to reduce heat loss.
- Install low-flow toilets and aerators on faucets.
- Verify that any energy management system (EMS) you employ switches the Heat/AC into setback mode during unoccupied hours. Time clocks and computer controls may need adjustments after power outages or seasonal time changes.
- Save paper. Photocopy only what you need. Always use the second side of paper, either by printing on both sides or using the blank side as scrap paper.



- Collect your utility bills. Separate electricity and fuel bills. Target the largest energy consumer or the largest bill for energy conservation measures.
- Use coffee mugs instead of disposable cups.
- Add a banner at the bottom of your e-mails that promotes conservation. Example:



Please consider the environment before printing this email

Recycling



Recycling in Hopewell is provided through the Central Virginia Waste Management Authority (CVWMA) in the form of drop-off mixed item containers. The locations and items Accepted are listed below.

1. Locations:

City Hall (300 North Main Street) (Rear Parking Lot)-

Fire Station 2 (3400 Virginia Street)-

Cavalier Square Shopping Center-

Colonial Corner Shopping Center (4100 Oaklawn Blvd.)-

2. Items Accepted:

- **Newspapers, Magazines and Catalogs**

Place in separate collection bins where available. If these bins are not available, place in mixed paper bins.

Include Glossy Inserts/Slick Advertisements

- No plastic bags

- **Mixed Paper**

"Junk" Mail, Computer Paper, Phone Books and Cereal/Dry Food Boxes

- No gift wrapping paper or foil
- No napkins or tissues
- No plastic coated paper
- No hardcover books



- **Cardboard**



Corrugated cardboard boxes
Flatten and insert into long narrow slot
on bins

**Recycle the Following Items Together
No Need to Sort!**

- **Cans and Foil**

Aluminum Cans, Steel Food & Beverage Cans,
Aluminum Foil, & Foil Products

- No aerosol cans
- No aluminum siding or other scrap metal
- No pesticide or herbicide containers

-RINSE, CRUSH, LABELS ARE OKAY-

- **Plastic Bottles**

Only Narrow-Neck Bottles with a PETE ♻️ or HDPE ♻️
on the bottom. Includes Soda,
Shampoo & Detergent Bottles and
Milk Jugs

- No plastic bags
- No "wide-mouth" containers
(tubs or cups)
- No motor oil bottles
- No plastic with numbers other than ♻️ or ♻️

-RINSE, DISCARD LIDS, CRUSH, LABELS ARE OKAY-



- **Glass Bottles and Jars**

Clear, Brown & Green Food & Beverage
Containers



- No caps or bottle tops of any kind
- No window glass

- No dishes, cook ware or drinking glasses
 - No ceramic, light bulbs or mirrors
- RINSE & DISCARD LIDS. LABELS ARE OKAY-

Other Recycling

• Electronics

Various parts of popular electronic devices may contain dangerous heavy metals, including lead, silver, barium, cadmium, chromium and mercury. CVWMA's electronics recycling program helps citizens properly dispose of unwanted equipment instead of landfilling them where they could cause soil, water or air contamination. Equipment collected in this program will be demanufactured for recycling. Some components may be refurbished for continued use.



- CVWMA and member communities offer a variety of opportunities to recycle unwanted electronics. Saturday events are held periodically around the region. Check www.cvwma.com for dates and locations.
- There is one permanent location open to the entire region:

Open to the public (any resident or business in central Virginia).

AERC Recycling Solutions

116 Sylvia Road, Suite E

Ashland, VA 23005

Monday through Friday, 8:30 am - 5:00 pm

(804) 798-9295 for fees charged

• Accepted Items and Fees

Fees are charged to recycle the following items. These items require special handling due to the leaded glass

and mercury they contain. Payment is accepted by cash or check (payable to Advanced Technologies).



- Televisions, plastic
each
\$5
- Televisions, wood-encased
each \$10
- Computer monitors
each
\$5
- Fluorescent Light Bulbs (CFLs)
each

\$.25

Items accepted at no charge include:

- Computer systems (hard drive, CPU)
 - Computer accessories (cables, wires, keyboards, mice, speakers, etc.)
 - Printers, scanners & copiers
 - Fax machines
 - VCRs & camcorders
 - Stereos
 - Microwaves
 - Anything with a plug!
- **Compact Florescent light bulbs (CFLs)**
 - Home Depot recycles CFLs for free.
 - **Used Motor Oil**
 - Most auto parts stores take used motor oil

Composting

Second to paper, yard waste comprises the largest volume of trash and consumes the most landfill space. Composting is a fun and easy way to keep this rich waste out of landfills and to return organic nutrients to the soil without using commercial additives. In addition, the design of modern landfills prevents needed oxygen and water from mixing with organic waste, inhibiting natural decomposition.

- Below are general guidelines for creating compost. For best results, please follow the instructions received with your specific compost bin.

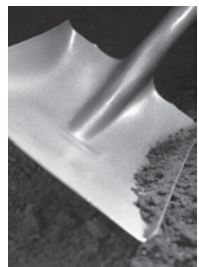
- Combine leaves, grass and yard clippings in a bin. The bin should receive an equal amount of sunlight and shade during the day.



- Add kitchen debris such as fruit and vegetable scraps, egg and nut shells, paper towels, tea bags, coffee grounds

and filters. DO NOT include meat, dairy products, fat or grease.

- Alternate food wastes with yard waste. The ideal compost mixture contains three parts "browns" (dry leaves, brush and twigs) to one part "greens" (food scraps, weeds and grass clippings).
- A balance of damp and dry materials will speed up the composting process. If the pile appears too dry, lightly sprinkle it with water.
- Periodically turn the materials with a pitchfork or shovel to circulate air and distribute moisture. Don't be alarmed if it





gives off heat... this is nature taking its course!

- When the mixture has turned to dark brown/black crumbly mixture, add it to your lawn or vegetable and flower gardens.
- The amount of time needed to create compost varies with the time of year, air temperature, and moisture in your bin.

Not only have you diverted organic waste from landfills where it will NOT decompose, but you've created a natural soil enhancer for use on your lawn or garden.

Rain Barrels

What is a rain barrel?

A rain barrel is a container placed at the base of a downspout that collects rain water from rooftops (storm water runoff) for later use. Rain barrels come in varying shapes and sizes, and typically hold 55-75 gallons of water. By connecting several barrels in a series you can expand that capacity to well over 100 gallons. An overflow hose, located at the top/back of the barrel, designates the direction of excess water flow. It can be replaced with a hose of longer lengths, to divert overflow to a garden or distant runoff area.



Why Rain Barrels?

Reduce storm water runoff



Runoff can cause erosion, and carry fertilizers, pesticides and other chemicals into streams, rivers and eventually the bay where they are very damaging, especially during peak runoff. Rain barrels can help manage this by collecting water from your roof that would otherwise be lost to runoff.

Don't think you can make a difference? Consider this; a 1,200 square foot (30 x 40 foot) roof that receives 1 inch

of rain adds up to **more than 700 gallons.**

Plants love rain water

Because rainwater has no added chemicals, is usually soft and free of dissolved minerals, it is great for indoor plants, garden/lawn watering, washing your car, and birdbaths.



You will conserve water

“Weather” or not there is a drought, we should always conserve water. Ground and fresh water supplies are limited. Therefore, we need to use it responsibly.

Convenience

Water from rain barrels is easily accessible for various garden chores. (Also, if you depend on electricity to run your well pump, this water is handy in power outages.)



Save Money

If connected to city water, why pay to water your gardens when you can collect hundreds of gallons at no cost?

Getting Started

Choose a location

Choosing a location can be fun, because the best time to investigate storm water runoff is when it’s raining! You will need to observe where the greatest water flow is

from your roof. Then consider where you will use the water the most (near to a garden etc.) These two considerations will also give you an idea of what size barrel you will need and the length of hose needed to go along with it.



Choose a barrel-prefab/homemade-

If you have the money, rain barrels can be purchased at some garden supply centers. They cost from \$40 up, depending on the one you choose. Do a search on the internet for “rain barrels” to find some retailers.

To build your own-

Instructions for building your own rain barrel can be found at the Chesapeake Bay Foundation website-

http://www.cbf.org/site/DocServer/rain_barrel_guide.pdf?docID=681

Also watch for local rain-barrel building workshops which have been offered by several organizations from time to time, like The Friends of the Lower Appomattox River and Longwood University.

Other Green Information Resources

Local Library:

Maude Langhorne Nelson
Appomattox Regional Headquarters Library
209 East Cawson Street
Hopewell, VA 23860
(804) 458-6329 (804) 861-0322
Fax: (804) 458-4349

Internet Resources:

Energy conservation

- Dominion Virginia Power
www.dom.com/customer/efficiency/energy_conservation_index.jsp.
- US Department of Energy
<http://apps1.eere.energy.gov/consumer/>
- Virginia Cooperative Extension
www.energyguide.ext.vt.edu/index.php

Recycling

- Central Virginia Waste Management Authority (CVWMA) www.cvwma.com/recycling

Greening Your Life

- National Geographic
www.thegreenguide.com/

Chesapeake Bay

- Chesapeake Bay Foundation
www.cbf.org



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efficiency and environmental stewardship”

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